

08/03/21

Printing Pages : 2

Paper Code : BPH-301
(C) (SVSU:2020-21/C)

Enrollment No.

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B.Pharm

II YEAR, III SEMESTER EXAMINATION

Pharmaceutics – II (Unit Operations-I)

[Time : 3:00 Hours]

[Max. Marks : 70]

Note: Attempt all questions as per instructions.

1. Multiple Choice Questions (MCQ) | 14×1=14 |

1. Which metal makes the steel corrosion resistant?
a. Chromium and Nickel b. Copper and Selenium
c. Titanium and Molybdenum d. Titanium and Niobium
2. Unit of temperature in SI unit is
a. Celsius b. Fahrenheit c. Kelvin d. None
3. What is unit of Reynolds' number?
a. Kg/m^3 b. m.s^2 c. Dyne/cm d. None
4. Water for injection is a/an solution.
a. Hypertonic b. Hypotonic c. Isotonic d. None
5. Clarification is a process when concentration is below
a. 10%w/v b. 1.0%w/v c. 0.1%w/v d. 1.1%w/v
6. Centrifugal method is used in one of the following process
a. Mixing b. purification c. separation d. sizing
7. Refrigeration capacity is expressed as
a. Watt b. ton c. joule d. kgm/cm^2
8. Which of the following is not filtration centrifuge?
a. Conical dis b. continuous horizontal c. perforated basket d. super-centrifuge
9. What are the factors responsible for the humidification process?
a. Humidity and density of moisture b. Humidity and pressure of air
c. Humidity and temperature of air d. Temperature and pressure of moisture

[P.T.O.]

10. Which one of the following is not a fundamental unit?
a. Length b. Mass c. Density d. Temperature
11. Which metal makes the steel corrosion resistant?
a. Chromium and Nickel b. Copper and Selenium c. Titanium and Molybdenum
d. Titanium and Niobium
12. Electrical precipitators are employed to prevent one of the following hazards
a. Chemical smoke b. dust c. fire d. inflammable liquids
13. Which is not an example of ferrous metal?
a. Stainless steel b. Steel c. Aluminum d. Cast iron
14. Which type of glass is used for the preparation of distilled water still?
a. Hard glass b. Jena glass c. Quartz glass d. Soft glass

II. Attempt any four questions of the following [3.5×4=14]

1. What do you mean by water for injection?
2. Write a note on corrosion resistance.
3. Define caking of crystals. How can you prevent it?
4. Write a note on filter aids.
5. Write any one method of water treatment.

III. Attempt any two questions of the following [7×2=14]

1. Compare 'centrifugal filters' with 'centrifugal sediments'.
2. What are 'Psychometric chart'? Discuss their uses.
3. Write a note on 'stainless steel' as a material of construction.

IV. Attempt any two questions of the following [7×2=14]

1. What do you mean by refrigeration? Give the principle and application of refrigeration.
2. Write construction and working of 'Swenson walker crystallizer'.
3. What do you mean by fire hazard? Discuss about its causes and prevention.

V. Attempt any one of the following [14×1=14]

- (i) Explain the principle, construction, working, advantages and disadvantages of rotary drum filter with suitable diagram.
- (ii) Give the general composition, types, resistance properties and pharmaceutical application with stainless steel.



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(B) (SVSU:2020-21/R)

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B.PHARM
IIND YEAR, III SEMESTER EXAMINATION
PHARMACEUTICAL ORGANIC CHEMISTRY II

Time : 3 Hours]

[Max. Marks : 75

NOTE: Attempt all the questions as per instructions.

[10×2=20]

I Long Question : Answer Any Two

1. Define Acidity. Give reactions of Phenol.
2. Give Electrophilic aromatic substitution reactions with suitable examples.
3. Write about Acid value, Saponification value, Ester value and Iodine value.

[5×7=35]

II. Short Question: Answer any Seven

1. Write Hydrolysis of fat.
2. Discuss the stability of Cycloalkane.
3. Write substituent's affecting basicity of aromatic amines.
4. Give structure and uses of cresol and Resorcinol.
5. Discuss structure and uses of Naphthalene.
6. Explain establishment & importance of Benzene.
7. Give synthetic importance of diazonium salts.
8. Give Reactions of Benzoic acids.
9. Write reactions of cyclopropane.

[20×1=20]

III. Objectives Question: Answer All Question

1. Reimann-Tiemann reaction is given by
a.) Benzene b.) Chlorobenzene
c.) Phenol d.) None of these
2. Benzene has
a.) Three π electrons b.) Two π electrons c.) One π electrons d.) All of these
3. Naphthol has
a.) One -OH group b.) Two -OH group
c.) Three -OH group d.) Four -OH group
4. Basicity of Aniline increases by
a.) Electron donating groups
b.) Electron attracting groups
c.) Both d.) None
5. Anisole is formed by
a.) Phenol b.) Chlorobenzene c.) Benzene d.) None
6. Resorcinol has
a.) One phenolic group b.) Two phenolic group c.) Three phenolic group d.) None

[P.T.O.]

7. Electrophile is
a.) Electron rich b.) Electron poor
c.) Both d.) None
8. Chloramine is used as
a.) Pesticide b.) Insecticide c.) Antiseptic d.) None of these
9. Saccharine is used as?
a.) Salt b.) Sugar c.) Soda d.) None of these
10. Dichlorocarbene is a
a.) Electrophile b.) Nucleophile c.) Both d.) None
11. The carbon atoms in benzene ring are
a) sp hybridized b) sp^2 hybridized
c) sp^3 hybridized d) None of these
12. Electrophile for sulphonation is
a.) NH_3 b.) H_2O
c.) SO_3 d.) SO_3H
13. Substrate for preparation of diazonium salt is
a.) Benzene b.) Nitrobenzene
c.) Acetic acid d.) Aniline
14. Ester is formed by
a.) Methane b.) Hexane
c.) Benzene d.) Phenol
15. Markovnikov's rule follows
a.) Methane b.) Ethane
c.) Cyclopropane d.) None
16. Anthracene is made up of
a.) One benzene ring
b.) Two benzene ring
c.) Three benzene ring
d.) Four benzene ring
17. Phenanthrene is isomer of
a.) Anthracene b.) Steroid
c.) Protein d.) Terpene
18. Which one gives easily ring opening reaction?
a.) Cyclopropane b.) Cyclobutane
c.) Cyclopentane d.) None of these
19. Example of Cycloalkane is
a.) Cyclopropane b.) Cyclobutane
c.) Cyclopentane d.) All
20. Aniline reacts with HNO_2/HCl to give
a.) Benzene b.) Benzene hexachloride
c.) Diazonium salt d.) None

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Paper Code : BP-302T
(A) (SVSU:2020-21/R)

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B.Pharm

II YEAR, III SEMESTER EXAMINATION

Physical Pharmaceutics-I,

[Time : 3:00 Hours]

[Max. Marks : 75]

I. Multiple Choice Questions (MCQ) [20×1=20]

1. Buffer index is also known as
a. Buffer efficiency b. Buffer value c. Both d. None
2. In biological buffer system plasma is buffer
a. secondary b. Primary c. tertiary d. None
3. Which one of the following is an isotonic solution
a. 0.9N NaCl b. 0.09N NaCl c. 0.1N NaCl d. 0.01N NaCl
4. A phase which exists between liquid and crystalline state is known as
a. Metaphase b. Polymorph c. Mesophase d. Solid crystals
5. Above which temperature, no liquefaction of gas is possible
a. Absolute b. Critical c. Boiling point d. None
6. Polymorphs differs in which of the following aspect
a. Molecular weight b. Molecular number c. Shape d. Crystalline structure
7. EDTA is an example of ligand type
a. Bidentate b. Hexadentate c. Tetradentate d. Unidentate
8. Glycine forms complex with cupric ions only at the pH range
a. Neutral b. Acidic c. Alkaline d. Both acidic and alkaline
9. Which complex is used as an electrode in pH determination?
a. Layer types b. Clathrates c. Chelates d. Quinhydrone
10. Carbon dioxide circulates in the living body by means of
a. Agglomeration b. Aggregation c. Diffusion d. Flocculation
11. What is the effect of chemical reactions on solubility of liquid-gas solution?
a. Increases b. Decreases c. No effect d. Both A and B

12. Inclusion complexes are also known as

- a. Acculsion b. Exclusion c. Recclusion d. Occlusion

13. The HLB range for lipophilic surfactants is

- a. 2 to 9 b. 9-16 c. 16-20 d. Above 20

14. Which substance decreases the surface tension of water?

- a. Span b. methanol c. sodium chloride d. sucrose

15. For wetting the contact angle (in degree) should have a value nearly

- a. 0 b. 90 c. 180 d. 270

16. Surface tension is the change in the surface free energy per unit change in

- a. area b. density c. length d. volume

17. At critical temperature, surface tension of the liquid becomes

- a. higher b. lower c. Zero d. No effect

18. Unit of surface tension is

- a. Newton/meter b. Dynes c. Poise d. None

19. Physical stability of Vitamin A and D can be enhanced by complexation with

- a. EDTA b. Caffeine c. β cyclodextrin d. BAL

20. Which property is similar in case of eutectic mixtures?

- a. Boiling point b. Melting point c. Surface tension d. Lattice arrangement

II. Long Answers (Answer 2 out of 3) [2×10=20]

1. Write in detail about surface active agents.

2. Give classification of complexes with suitable examples.

3. Write a note on –

Latent heat, Eutectic mixture, Liquid crystals, Glassy state, Polymorphism

III. Short Answers (Answer 7 out of 9) [7×5=35]

1. Discuss about distribution law, its limitations and applications.

2. What you know about HLB scale? Write its estimation methods.

3. Write a note on surface free energy and spreading coefficient.

4. What are ideal and real solutions?

5. Write about various diffusion systems in biological systems.

6. What is the application of buffer in pharmacy?

7. What are buffered isotonic solutions?

8. Write a note on partially miscible liquids and critical solution temperature.

9. What are different solubility expressions?

99.2

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B.PHARM

2nd YEAR 3rd SEMESTER EXAMINATION

Pharmaceutical Microbiology

[Max. Marks : 75]

[Time : 3:00 Hours]

(1 x 20=20)

Q.1 Each question carries ONE mark-

- 1) Contributions of Louis Pasteur depends upon
a) Microbiology b) Spontaneous germination c) Development of effective vaccines rabies and anthrax d) All of these
- 2) Agar media is prepared by-
a) Beef extract b) Peptone c) NaCl d) All of these
- 3) Differential staining is based on
a) Gram+ b) Gram- c) both (a) and (b) d) None of these
- 4) Anaerobic growth of bacteria is based on-
a) Presence of oxygen b) Absence of oxygen c) Both (a) and (b) d) None
- 5) Spread plating technique is used for-
a) Isolation of bacteria b) Cultivation of bacteria c) Measurement of bacteria d) Shape of bacteria
- 6) Amongst the following, which one is the most effective method of killing microorganisms?
a) High temperature b) Low temperature
c) High temperature, high moisture d) Low temperature, high moisture
- 7) Which of the following is the most accurate method for microbial assay of antibiotics?
a) Physical assay b) Chemical assay c) Biological assay d) Chemical and biological assay
- 8) The international unit of penicillin is defined by how much amount of International Standard?
a) 1 mg b) 0.262 µg c) 0.5988 µg d) 0.5 mg
- 9) E-Coli is
a) Gram -VE b) Gram +VE c) Both d) None
- 10) Browne's tube is which of the following-
a) Physical Indicator b) Chemical Indicator c) Simple d) All.
- 11) Define sterilization
- 12) Which of the following antibiotic have a sparing effect on the B12 in the diet?
a) Streptomycin b) Tetracycline
c) Anthramycin d) Chloramphenicol
- 13) Mercury in concentration of 1:1000 is used as
a) Bacteriostatic b) Bactericidal c) Both d) None
- 14) Who is the father of microbiology-?
a) Louis Pasteur b) John Tyndall c) Robert Koch d) Richard Petri
- 15) History of microbiology is divided into-
a) 4 b) 3 c) 2 d)

16) In Simple staining, we use
a) One dye b) More than one dye c) Two dye d) None

17) Zhiel Neilson Carbol Fuchsin is used in
a) Acid fast b) Gram staining c) Simple d) ALL

18) Microbiology is based on

a) Microorganism b) microscope c) raw material d) bacterial growth

19) Which scientist demonstrated the role of bacteria in causing disease?

a) Robert Koch b) Robert hook c) Elbert d) Paul enrich

20) Which of the following apparatus is used to provide steam under regulated pressure?

a) Autoclave b) Laminar air flow c) Incubator d) Hot oven

Q.2 Attempt any SEVEN:

(7×5=35)

1) Explain sterility testing of ophthalmic product.

2) Define clean area classification.

3) Discuss the application of cell culture?

4) Write about the electron microscopy.

5) Explain Acid fast staining.

6) What is chemical sterilization?

7) Define antiseptic and give its example.

8) Explain Quantitative measurement of bacterial growth (total & viable count).

9) Give the structure of cell.

(2×10=20)

Q.3 Attempt any TWO:

a) Study of principle, procedure, merits, demerits and applications of physical sterilization in detail.

b) Write about Preservation of pharmaceutical products using antimicrobial agents, evaluation of microbial stability of formulations.

c) Discuss in detailed about disinfectant and their evaluation?

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B.PHARM
IIth YEAR [(11th sem.) EXAMINATION
Pharmacognosy-I

[Time : 3:00 Hours]

[Max. Marks : 70]

I. Attempt any One of the following:

[1x14=14]

1. Define Adulteration. Give the various types of adulteration along with examples. Give physical, chemical and biological methods of evaluation of adulterants.

2. Write a short note on carbohydrates. Give systemic biological source, characteristics, chemical test and uses of Isabgol and agar.

II. Attempt any two of the following:

[2x7=14]

1. Discuss various plant hormones and their application.

2. Define and classify lipids. Give systemic biological source, characteristics, chemical test and uses of castor oil.

3. Write about microscopic and morphology method for evaluation.

III. Attempt any two of the following:

[2x7=14]

1. Give the occurrence, distribution and effect of auxins and cytokinins along with suitable examples in plant growth.

2. Discuss the effect of poly houses and green houses for cultivation of medicinal plants.

3. Write about the history of pharmacognosy

IV. Attempt any four of the following:

[4x3.5=14]

1. Define polyploidy and hybridization along with suitable examples.

2. Give the taxonomical classification of drugs.

3. Give systemic biological source, characteristics, chemical test and uses of castor oil.

4. Define and classify lipids along with suitable examples.

5. Give physical method for evaluation of adulteration.

V. Attempt All. Choose the correct option

[14x1=14]

1. Which of the following is an unorganized drug-

- a) Senna
- b) Aloe
- c) Neem
- d) None of the above

2. Calyx is found in-

- a) Fruits
- b) Stem
- c) Flower
- d) Root

3. Dioecious plants generally have-

- a) Male – female in same part
- b) Male – female in separate part
- c) Only male
- d) only female

4. Substitution using exhausted drugs is type of-

- a) Unintentional Adulteration
- b) Intentional Adulteration
- c) Both a and b
- d) None of above

5. In marine source, Ara- A is an example of -

- a) Antibacterial agent
- b) Antiviral agent
- c) Antifungal agent
- d) None of above

6. 'Molish test' is generally used in determination of?

- a) Alkaloids
- b) Lipids
- c) Carbohydrates
- d) None of above

7. 'Arabin' is a chief chemical constituent of-

- a) Acacia
- b) Agar
- c) Honey
- d) Starch

8. *Gelidium amansii* is a biological source of -

- a) Acacia
- b) Starch
- c) Agar
- d) Pectin

9. Amylopectin is found in -

- a) Tragacanth
- b) Starch
- c) Isabgol
- d) None of Above

10. Which of the following drug contain lipids -

- a) Starch
- b) Agar
- c) Beeswax
- d) Sterculia

11. 'Cell elongation' is generally caused by -

- a) Auxins
- b) Cytokinnins
- c) both a and b
- d) None of Above

12. Which of the following is act as plant growth inhibitor?

- a) Gibberellins
- b) Cytokinnins
- c) Abscissic acid
- d) Auxins

13. Particle size less than 0.002 mm in soil is known as -

- a) Silt
- b) Fine clay
- c) Coarse sand
- d) Fine sand

14. Which of the method is vegetative propagation in cultivation of plants?

- a) Broadcasting
- b) Grafting
- c) Dibbling
- d) None of above

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(A) (SVSU:2020-21/C)

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B.PHARM

II YEAR IIIrd SEMESTER EXAMINATION

Pharmaceutical Organic Chemistry-III

[Time : 3:00 Hours]

[Max. Marks : 70]

Note: All questions are compulsory

Question No.1 All Multiple choice question are compulsory [2×7=14]

1. Which one has more than six member ring?
a) Benzene b) Toulene c) Naphthalene d) All
2. Smallest unit of Protein is
a) Amino acids b) Sugar c) Trienes d) alkoxy compounds
3. Which one is seven member heterocyclic compound?
a.) Benzene b.) Quinoline c.) Pyrrole d.) Azepine
4. Nitrogen containing compound is
a.) Benzene b.) Hexane c.) Pyrazole d.) None
5. The carbon atoms in Thiophene ring are
a) Sp hybridized b) Sp² hybridized c) Sp³ hybridized d) None of these
6. Which of the following compound is acidic in nature?
a) Hexane b) Propane c) Phenol d) Chlorobenzene
7. Heterocyclic compound is:
a.) Phenol b.) Chlorobenzene c.) Benzene d.) Pyrrole

[P.T.O.]

Question No. 2. Attempt any FOUR questions of following. [3.5 x 4=14]

- Discuss chemistry of Fats.
- Write Reactions of quinoline.
- Discuss test of Protein.
- Give Reimer-Tiemann reaction.
- Explain heterocyclic rings with suitable examples.

Question No. 3 Attempt any TWO questions of following. [7 x 2=14]

- Give method of preparation and reactions of Protein.
- Discuss Aromaticity.
- Give the properties and reactions of Benzimidazole.

Question No. 4. Attempt any TWO questions of following. [7 x 2=14]

- Explain preparation and reactions of Imidazole.
- Discuss chemistry of Nucleic acids.
- Discuss Preparations of Pyridine.

Question No. 5. Attempt any ONE questions of following. [14 x 1=14]

- Write Reactions of Phenol.
- Give the classification & general methods of preparation of Amino acids in detail.



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(C) (SVSU:2020-21/R)

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B.Pharm

IInd YEAR, IIIrd SEMESTER EXAMINATION

Pharmaceutical Engineering

[Time : 3:00 Hours]

[Max. Marks : 75]

I. Multiple Choice Questions | 20×1=20 |
(MCQ)

1. The straight line flow of fluid is called as:
(a) Laminar flow (b) Turbulent flow (c) Both (d) None
2. Ball Mill is based on the principle of:
(a) Impact (b) Cutting (c) Impact & Attrition (d) Compression
3. The study of fluids in motion is called as-
(a) Fluid statics (b) Fluid dynamics (c) Both (d) None
4. How many types of powders are mentioned officially in IP?
(a) 3 (b) 4 (c) 5 (d) 6
5. Hammer Mill works on the principle of:
(a) Compression (b) Impact (c) Impact & Attrition (d) Cutting
6. Size Reduction is also known as:
(a) Centrifugation (b) Compaction (c) Comminution (d) Extraction
7. Heat transfer which involves movement of fluid particles is:
(a) Conduction (b) Convection (c) Radiation (d) All of the above
8. Drying step is generally done in a process:
(a) At starting (b) At end (c) In between (d) None
9. Following is an example of a Filter Aid:
(a) Sodium Alginate (b) Gelatin (c) Talc (d) All of above
10. The full form of HEPA filter is-
(a) High efficiency Particulate Air filter (b) High efficiency Pure Air filter
(c) High efficiency Prime Air filter (d) None
11. The agents used to increase the rate of filtration are known as-
(a) Filter agents (b) Filter aids (c) Filter helpers (d) None

12. What is the ideal speed of a Perforated basket centrifuge-
(a) 300rpm (b) 500rpm (c) 1000rpm (d) 1500rpm

13. Which of the following shaped particles are suitable for mixing-
(a) Round (b) Spherical (c) Square (d) Flat

14. Factors affecting mixing are-
(a) Particle Size (b) Particle Shape (c) Both (d) None

15. Centrifugation is used to separate-
(a) Miscible liquids (b) Immiscible liquids (c) Both (d) None

16. Corrosion of metals involves-

(a) Physical reactions (b) Chemical reactions (c) Both (d) None

17. Which of the following are physical properties that should be considered during selection of materials for plant construction-

(a) Hardness (b) Density (c) Thermal conductivity (d) All of above

18. Aluminum is an example of-

(a) Ferrous metal (b) Non Ferrous metal (c) Both (d) None

19. The corrosion which is present at specific area of metal is called as-

(a) General corrosion (b) Localized corrosion (c) Pitting corrosion (d) None

20. Protection against sunlight can be achieved by using which container-

(a) Red colored (b) Amber colored (c) Green colored (d) All of above

II. Long Answers (Answer 2 out of 3) [2×10=20]

1. What are the two types of Fluid Flow? Explain this with Reynolds Experiment & tell about the Reynolds number.

2. Explain the principle, construction & working of Hammer Mill.

3. Write a note on Factors affecting selection of materials for Pharmaceutical Plant Construction & Materials used for Plant Construction.

III. Short Answers (Answer 7 out of 9) [7×5=35]

1. What do you mean by Size Reduction? Give the Mechanisms of Size Reduction.

2. Write about the official standard of powders.

3. Give the principle, construction & method of Simple Distillation.

4. Give the objectives & application of drying. Give the full form of EMC.

5. What is Evaporation? Give the factors effecting evaporation.

6. Write a note on (i) Filter Medium (ii) Filter Aid

7. Give the principle, construction & working of Double Cone Blender.

8. Write a brief note on corrosion and its causing factors.

9. Give some examples of Ferrous & Non-Ferrous metals used in industries.